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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
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2633	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/785,474	TOMICH ET AL.	
	Examiner	Art Unit	
	David S. Kim	2633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 February 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *24 February 2004* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *24 February 2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. This application claim priority of prior Application No. 09/435,657, filed on 08 November 1999. If applicant desires benefit of this previously filed application (i.e., 09/435,657) under 35 U.S.C. 120, specific reference to the earlier filed application must be made in the instant application. For benefit claims under 35 U.S.C. 120, 121 or 365(c), the reference must include the *relationship (i.e., continuation, divisional, or continuation-in-part)* of the applications. This should appear as the first sentence(s) of the specification following the title, preferably as a separate paragraph unless it appears in an application data sheet. The status of nonprovisional parent application(s) (whether patented or abandoned) should also be included. If a parent application has become a patent, the expression "now Patent No. _____" should follow the filing date of the parent application. If a parent application has become abandoned, the expression "now abandoned" should follow the filing date of the parent application.

Although a specific reference to 09/435,657 (i.e., the first sentence of the specification following the title as a separate paragraph) was made in the instant application, the reference *does not include the relationship* of the applications. Additionally, Examiner did not notice a proper reference in an application data sheet. Applicant does include the relationship of the applications in the instant application (i.e., the relationship is included in an application transmittal letter) but not in the manner specified by 37 CFR 1.78(a). Accordingly, it appears that Applicant's benefit claim of Application No. 09/435,657 is **improper**. See MPEP 201.11, section III. REFERENCE TO PRIOR APPLICATION(S), particularly subsections A, D, and F.

2. Additionally, this application claim priority of prior Application No. 08/607,964, filed on 29 February 1996, under 35 U.S.C. 120. If applicant desires benefit of this previously filed application (i.e., 08/607,964) under 35 U.S.C. 120, specific reference to the earlier filed application must be made in the instant application. For benefit claims under 35 U.S.C. 120, 121

or 365(c), the reference must include the *relationship (i.e., continuation, divisional, or continuation-in-part)* of the applications. This should appear as the first sentence(s) of the specification following the title, preferably as a separate paragraph unless it appears in an application data sheet. The status of nonprovisional parent application(s) (whether patented or abandoned) should also be included. If a parent application has become a patent, the expression "now Patent No. _____" should follow the filing date of the parent application. If a parent application has become abandoned, the expression "now abandoned" should follow the filing date of the parent application.

Although a specific reference to 08/607,964 (i.e., in a declaration) was made in the instant application, it appears that the reference *does not include the relationship* of the applications. Additionally, Examiner did not notice a proper reference in an application data sheet. Applicant does include a benefit claim in the instant application (i.e., the claim is included in a declaration) but not in the manner specified by 37 CFR 1.78(a). Accordingly, it appears that Applicant's benefit claim of Application No. 08/607,964 is **improper**. See MPEP 201.11, section III. REFERENCE TO PRIOR APPLICATION(S), particularly subsections A, D, and F.

3. If the application is a utility or plant application filed under 35 U.S.C. 111(a) on or after November 29, 2000, the specific reference must be submitted during the pendency of the application and within the later of four months from the actual filing date of the application or sixteen months from the filing date of the prior application. If the application is a utility or plant application which entered the national stage from an international application filed on or after November 29, 2000, after compliance with 35 U.S.C. 371, the specific reference must be submitted during the pendency of the application and within the later of four months from the date on which the national stage commenced under 35 U.S.C. 371(b) or (f) or sixteen months from the filing date of the prior application. See 37 CFR 1.78(a)(2)(ii) and (a)(5)(ii). This time

period is not extendable and a failure to submit the reference required by 35 U.S.C. 119(e) and/or 120, where applicable, within this time period is considered a waiver of any benefit of such prior application(s) under 35 U.S.C. 119(e), 120, 121 and 365(c). A benefit claim filed after the required time period may be accepted if it is accompanied by a grantable petition to accept an unintentionally delayed benefit claim under 35 U.S.C. 119(e), 120, 121 and 365(c). The petition must be accompanied by (1) the reference required by 35 U.S.C. 120 or 119(e) and 37 CFR 1.78(a)(2) or (a)(5) to the prior application (unless previously submitted), (2) a surcharge under 37 CFR 1.17(t), and (3) a statement that the entire delay between the date the claim was due under 37 CFR 1.78(a)(2) or (a)(5) and the date the claim was filed was unintentional. The Director may require additional information where there is a question whether the delay was unintentional. The petition should be addressed to: Mail Stop Petition, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

4. This application repeats a substantial portion of prior Application No. 08/607,964, filed on 29 February 1996, and prior Application No. 09/435,657, filed on 08 November 1999. This application also claims priority of both of these prior applications. Regarding 08/607,964, Applicant does not indicate the relationship between the instant application and 08/607,964. Regarding 09/435,657, Applicant indicates (i.e., in an application transmittal letter) that the instant application is a *divisional* application filed under 37 CFR 1.53(b) of 09/435,657. However, the instant application adds and claims additional disclosure *not presented* in the prior applications. Since the instant application names an inventor or inventors named in the prior applications, it may constitute a *continuation-in-part* of the prior applications. Should applicant desire to obtain the benefit of the filing dates of the prior applications, attention is directed to 35 U.S.C. 120 and 37 CFR 1.78. Presently, the relationship between the instant application and 08/607,964 is unclear. Also, the relationship between the instant application

and 09/435,657 is unclear. Accordingly, the instant application does not receive the benefit of either of the filing dates of the prior applications.

Drawings

5. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description:

Fig. 10 and all the reference characters therein.

Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

6. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the following limitations must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

(claim 7) the wide-signal bandwidth multi-access channel consists of two parallel fiber optic cables running counter directionally to one another.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must

be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Tomich et al. ("Tomich610")

8. **Claims 1-6 and 8-16** are rejected under 35 U.S.C. 102(a) and (b) as being anticipated by Tomich et al. (International Publication No. WO 98/53610, hereinafter "Tomich610").

Regarding claim 1, Tomich610 discloses:

A wide-signal bandwidth multi-access channel comprising a plurality of units each including:

a first circuit (optical detector circuit in p. 25, l. 3-4) adapted to receive photonic signals representative of a transmittable signal; and

a second circuit (optical laser transmit circuit in p. 25, l. 4-5) adapted to transmit multiplexed photonic signals representative of a multiplexed data signal, wherein the units are operably coupled to a third circuit and a subsequent set of the units, wherein such coupling provides a ring network configuration (p. 25, l. 6-10).

Regarding claim 2, Tomich610 discloses:

The wide-signal bandwidth multi-access channel of claim 1, wherein each of the plurality of units further comprise:

a first module (second beamsplitter in p. 25, l. 16-17) comprising a first surface aligned with the second circuit;

another first circuit (second optical detector circuit in p. 25, l. 18-19) aligned with a second surface of the first module.

Regarding claim 3, Tomich610 discloses:

The wide-signal bandwidth multi-access channel of claim 1, wherein each of the plurality of units further comprise:

a second module (first beamsplitter in p. 25, l. 13) comprising a first surface aligned with the first circuit;

another second circuit (second optical laser transmit circuit in p. 25, l. 14-15) aligned with a second surface of the second module.

Regarding claim 4, Tomich610 discloses:

The wide-signal bandwidth multi-access channel of claim 1, wherein each of the plurality of units further comprise:

an optical window (optical window in p. 26, l. 3) comprising a top edge and a bottom edge;

an enclosure (enclosure in p. 26, l. 5) coupled to the top edge of the optical window; and

a bottom plate (bottom plate in p. 26, l. 6-8) coupled to the bottom edge of the optical window, wherein the first circuit and the second circuit of each of the units are protected.

Regarding claim 5, Tomich610 discloses:

The wide-signal bandwidth multi-access channel of claim 1, wherein the wide-signal bandwidth multi-access channel is adapted to allow all units on the ring network to simultaneously transmit and receive user data segments (Fig. 9).

Regarding claim 6, Tomich610 discloses:

The wide-signal bandwidth multi-access channel of claim 1, wherein the wide-signal bandwidth multi-access channel consists of a fiber optic cable (p. 26, l. 12-14).

Regarding claim 8, Tomich610 discloses:

The wide-signal bandwidth multi-access channel of claim 1, wherein the wide-signal bandwidth multi-access channel consists of an infrared (p. 6, l. 16-17) data signal path.

Regarding claim 9, Tomich610 discloses:

The wide-signal bandwidth multi-access channel of claim 1, wherein the wide-signal bandwidth multi-access channel consists of a radio frequency (p. 6, l. 16-17) data signal path.

Regarding claim 10, Tomich610 discloses:

The wide-signal bandwidth multi-access channel of claim 1, wherein the photonic signals comprise a multiplexed data carrier signal comprised of Ethernet packets (p. 15, l. 13-16).

Regarding claim 11, Tomich610 discloses:

The wide-signal bandwidth multi-access channel of claim 1, wherein the photonic signals comprise multiplexed data carrier signals comprised of Frame Relay packets (p. 15, l. 13-16).

Regarding claim 12, Tomich610 discloses:

The wide-signal bandwidth multi-access channel of claim 1, wherein the photonic signals are frequency domain multiplexed (FDM) signals (p. 11, l. 2).

Regarding claim 13, Tomich610 discloses:

The wide-signal bandwidth multi-access channel of claim 1, wherein the photonic signals use On-Off Keying waveforms (p. 14-15, bridging paragraph).

Regarding claim 14, Tomich610 discloses:

The wide-signal bandwidth multi-access channel of claim 1, wherein the photonic signals use Frequency-Shift Keying waveforms (p. 14-15, bridging paragraph).

Regarding claim 15, Tomich610 discloses:

The wide-signal bandwidth multi-access channel of claim 1, wherein the photonic signals use Quadrature-Phase-Shift Keying waveforms (p. 14-15, bridging paragraph).

Regarding claim 16, Tomich610 discloses:

The wide-signal bandwidth multi-access channel of claim 1, wherein the photonic signals use Quadrature-Amplitude-Modulation waveforms (p. 14-15, bridging paragraph).

Tomich et al. ("Tomich068")

9. **Claims 1-6 and 8-16** are rejected under 35 U.S.C. 102(a), (b), and (e) as being anticipated by Tomich et al. (U.S. Patent No. 5,983,068, hereinafter "Tomich068").

The applied reference has a common inventor and assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding claim 1, Tomich068 discloses:

A wide-signal bandwidth multi-access channel comprising a plurality of units each including:

a first circuit (optical detector circuit in col. 12, l. 48-49) adapted to receive photonic signals representative of a transmittable signal; and

a second circuit (optical laser transmit circuit in col. 12, l. 50-51) adapted to transmit multiplexed photonic signals representative of a multiplexed data signal, wherein the units are operably coupled to a third circuit and a subsequent set of the units, wherein such coupling provides a ring network configuration (col. 12, l. 52-59).

Regarding claim 2, Tomicho68 discloses:

The wide-signal bandwidth multi-access channel of claim 1, wherein each of the plurality of units further comprise:

a first module (second beamsplitter in col. 12, l. 66-67) comprising a first surface aligned with the second circuit;

another first circuit (second optical detector circuit in col. 13, l. 1-2) aligned with a second surface of the first module.

Regarding claim 3, Tomicho68 discloses:

The wide-signal bandwidth multi-access channel of claim 1, wherein each of the plurality of units further comprise:

a second module (first beamsplitter in col. 12, l. 62-63) comprising a first surface aligned with the first circuit;

another second circuit (second optical laser transmit circuit in col. 12, l. 64-65) aligned with a second surface of the second module.

Regarding claim 4, Tomicho68 discloses:

The wide-signal bandwidth multi-access channel of claim 1, wherein each of the plurality of units further comprise:

an optical window (optical window in col. 13, l. 5-6) comprising a top edge and a bottom edge;

an enclosure (enclosure in col. 13, l. 8-9) coupled to the top edge of the optical window; and

a bottom plate (bottom plate in col. 13, l. 10-13) coupled to the bottom edge of the optical window, wherein the first circuit and the second circuit of each of the units are protected.

Regarding claim 5, Tomicho68 discloses:

The wide-signal bandwidth multi-access channel of claim 1, wherein the wide-signal bandwidth multi-access channel is adapted to allow all units on the ring network to simultaneously transmit and receive user data segments (Fig. 9).

Regarding claim 6, Tomicho68 discloses:

The wide-signal bandwidth multi-access channel of claim 1, wherein the wide-signal bandwidth multi-access channel consists of a fiber optic cable (col. 13, l. 14-16).

Regarding claim 8, Tomicho68 discloses:

The wide-signal bandwidth multi-access channel of claim 1, wherein the wide-signal bandwidth multi-access channel consists of an infrared (col. 3, l. 46-47) data signal path.

Regarding claim 9, Tomicho68 discloses:

The wide-signal bandwidth multi-access channel of claim 1, wherein the wide-signal bandwidth multi-access channel consists of a radio frequency (col. 3, l. 46-48) data signal path.

Regarding claim 10, Tomicho68 discloses:

The wide-signal bandwidth multi-access channel of claim 1, wherein the photonic signals comprise a multiplexed data carrier signal comprised of Ethernet packets (col. 8, l. 7-11).

Regarding claim 11, Tomicho68 discloses:

The wide-signal bandwidth multi-access channel of claim 1, wherein the photonic signals comprise multiplexed data carrier signals comprised of Frame Relay packets (col. 8, l. 7-11).

Regarding claim 12, Tomicho68 discloses:

The wide-signal bandwidth multi-access channel of claim 1, wherein the photonic signals are frequency domain multiplexed (FDM) signals (col. 5, l. 55-57).

Regarding claim 13, Tomicho68 discloses:

The wide-signal bandwidth multi-access channel of claim 1, wherein the photonic signals use On-Off Keying waveforms (col. 7, l. 54-61).

Regarding claim 14, Tomicho68 discloses:

The wide-signal bandwidth multi-access channel of claim 1, wherein the photonic signals use Frequency-Shift Keying waveforms (col. 7, l. 54-61).

Regarding claim 15, Tomicho68 discloses:

The wide-signal bandwidth multi-access channel of claim 1, wherein the photonic signals use Quadrature-Phase-Shift Keying waveforms (col. 7, l. 54-61).

Regarding claim 16, Tomicho68 discloses:

The wide-signal bandwidth multi-access channel of claim 1, wherein the photonic signals use Quadrature-Amplitude-Modulation waveforms (col. 7, l. 54-61).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any

evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Tomich et al. ("Tomich610") as primary reference

12. **Claim 7** is rejected under 35 U.S.C. 103(a) as being unpatentable over Tomich610 as applied to claim 1 above, and further in view of Cisco ("Data Optimized Fiber Ring Solutions" from Applicant's IDS filed on 24 February 2004).

Regarding claim 7, Tomich610 does not expressly disclose:

The wide-signal bandwidth multi-access channel of claim 1, wherein the wide-signal bandwidth multi-access channel consists of two parallel fiber optic cables running counter directionally to one another.

Rather, Tomich610 discloses a channel that comprises a single fiber optic cable (fiber optic cable 200 in Fig. 1). However, such channels that consist of two parallel fiber optic cables running counter directionally to one another are extremely well known in the art. Cisco shows examples of such channels (figure under SONET/SDH Bandwidth Allocation and figure under Dynamic Packet Transport) as part of ring networks. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the channel of Tomich610 by adding a parallel fiber optic cable running counter directionally to fiber cable 200 in the ring network of Tomich610. One of ordinary skill in the art would have been motivated to do this since doing so enables a fault recovery mechanism in the event of a node failure or a fiber cut that causes the ring to wrap (Cisco, section SONET/SDH Ring Technology and section Cisco Dynamic Packet Transport), thus providing restored communication around the fault.

13. **Claim 17** is rejected under 35 U.S.C. 103(a) as being unpatentable over Tomich610.

Regarding claim 17, Tomich610 does not expressly disclose:

The wide-signal bandwidth multi-access channel of claim 1, wherein the photonic signals use a proprietary modulation.

However, Examiner takes Official Notice that the practice of employing proprietary modulation schemes is extremely well known in the art. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to arrange the photonic signals of Tomich610 to use a proprietary modulation. One of ordinary skill in the art would have been motivated to do this for the common purpose of interfacing the channel of Tomich610 with other equipment that also uses the same proprietary modulation. Another common motivation is to encourage customers to purchase the channel of Tomich610 and all of the equipment that interfaces with the channel of Tomich610 all from the same vendor, that is, the owner of the proprietary modulation scheme, thus increasing the revenues of the owner of the proprietary modulation scheme.

Tomich et al. ("Tomich068") as primary reference

14. **Claim 7** is rejected under 35 U.S.C. 103(a) as being unpatentable over Tomich068 as applied to claim 1 above, and further in view of Cisco ("Data Optimized Fiber Ring Solutions" from Applicant's IDS filed on 24 February 2004).

Regarding claim 7, Tomich068 does not expressly disclose:

The wide-signal bandwidth multi-access channel of claim 1, wherein the wide-signal bandwidth multi-access channel consists of two parallel fiber optic cables running counter directionally to one another.

Rather, Tomich068 discloses a channel that comprises a single fiber optic cable (fiber optic cable 200 in Fig. 1). However, such channels that consist of two parallel fiber optic cables running counter directionally to one another are extremely well known in the art. Cisco shows

examples of such channels (figure under SONET/SDH Bandwidth Allocation and figure under Dynamic Packet Transport) as part of ring networks. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the channel of Tomicho68 by adding a parallel fiber optic cable running counter directionally to fiber cable 200 in the ring network of Tomicho68. One of ordinary skill in the art would have been motivated to do this since doing so enables a fault recovery mechanism in the event of a node failure or a fiber cut that causes the ring to wrap (Cisco, section SONET/SDH Ring Technology and section Cisco Dynamic Packet Transport), thus providing restored communication around the fault.

15. **Claim 17** is rejected under 35 U.S.C. 103(a) as being unpatentable over Tomicho68.

Regarding claim 17, Tomicho68 does not expressly disclose:

The wide-signal bandwidth multi-access channel of claim 1, wherein the photonic signals use a proprietary modulation.

However, Examiner takes Official Notice that the practice of employing proprietary modulation schemes is extremely well known in the art. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to arrange the photonic signals of Tomicho68 to use a proprietary modulation. One of ordinary skill in the art would have been motivated to do this for the common purpose of interfacing the channel of Tomicho68 with other equipment that also uses the same proprietary modulation. Another common motivation is to encourage customers to purchase the channel of Tomicho68 and all of the equipment that interfaces with the channel of Tomicho68 all from the same vendor, that is, the owner of the proprietary modulation scheme, thus increasing the revenues of the owner of the proprietary modulation scheme.

Double Patenting

16. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Tomich et al. ("Tomicho68")

17. **Claims 1-4 and 6** are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 2-5 of Tomicho68 (U.S. Patent No. 5,983,068).

Claim no. of instant app.	Claim no. of patent	Limitations in instant app.	Corresponding limitations in patent
1	2	multi-access channel plurality of units first circuit second circuit third circuit subsequent set of the units ring network configuration	multi-access channel plurality of roof-top units optical detector circuit optical laser transmit circuit head-end communications circuit subsequent set of roof-top units ring network
2	3	first module	second beamsplitter
3	3	second module	first beamsplitter
4	4	optical window enclosure bottom plate	optical window roof-top enclosure bottom plate
6	5	fiber optic cable	fiber optic cable

18. **Claims 5 and 8-16** are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 2-5 of Tomicho68 as applied to claim 1

above, and further in view of Tomich610. Claims 2-5 of Tomich068 do not expressly disclose the subject matter of claims 5 and 8-16 of the instant application. However, Tomich610 does (see the treatment of claims 5 and 8-16 under Tomich610 above). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the invention of claims 2-5 of Tomich068 by the subject matter of claims 5 and 8-16, as shown by Tomich610. One of ordinary skill in the art would have been motivated to do this since Tomich610 expressly teaches these modifications to the invention of claims 2-5 (also disclosed in Tomich610, as shown in the treatment of claims 1-4 and 6 under Tomich610 above) of Tomich068.

19. **Claim 7** is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 2-5 of Tomich068 as applied to claim 1 above, and further in view of Cisco.

Regarding claim 7, claims 2-5 of Tomich068 do not expressly disclose:

The wide-signal bandwidth multi-access channel of claim 1, wherein the wide-signal bandwidth multi-access channel consists of two parallel fiber optic cables running counter directionally to one another.

Rather, claims 2-5 of Tomich068 disclose a channel that comprises a single fiber optic cable (fiber optic cable in claim 5). However, such channels that consist of two parallel fiber optic cables running counter directionally to one another are extremely well known in the art. Cisco shows examples of such channels (figure under SONET/SDH Bandwidth Allocation and figure under Dynamic Packet Transport) as part of ring networks. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the channel of claims 2-5 of Tomich068 by adding a parallel fiber optic cable running counter directionally to fiber cable 200 in the ring network of claims 2-5 of Tomich068. One of ordinary skill in the art would have been motivated to do this since doing so enables a fault recovery mechanism in the event of a node failure or a fiber cut that causes the ring to wrap (Cisco, section SONET/SDH

Ring Technology and section Cisco Dynamic Packet Transport), thus providing restored communication around the fault.

20. **Claim 17** is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 2-5 of Tomicho68.

Regarding claim 17, claims 2-5 of Tomicho68 do not expressly disclose:

The wide-signal bandwidth multi-access channel of claim 1, wherein the photonic signals use a proprietary modulation.

However, Examiner takes Official Notice that the practice of employing proprietary modulation schemes is extremely well known in the art. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to arrange the photonic signals of claims 2-5 of Tomicho68 to use a proprietary modulation. One of ordinary skill in the art would have been motivated to do this for the common purpose of interfacing the channel of claims 2-5 of Tomicho68 with other equipment that also uses the same proprietary modulation. Another common motivation is to encourage customers to purchase the channel of claims 2-5 of Tomicho68 and all of the equipment that interfaces with the channel of claims 2-5 of Tomicho68 all from the same vendor, that is, the owner of the proprietary modulation scheme, thus increasing the revenues of the owner of the proprietary modulation scheme.

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21. **Claims 1-4** are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 19-22 of copending Application No. 09/435,657. Although the conflicting claims are not identical, they are not patentably distinct from each other because the invention of the instant application is an obvious variation of the invention of 09/435,657.

Claim	Claim	Limitations in instant app.	Corresponding limitations in patent

no. of instant app.	no. of patent		
1	19	multi-access channel plurality of units first circuit second circuit third circuit subsequent set of the units ring network configuration	multi-access channel plurality of units optical detector circuit optical laser transmit circuit head-end communications circuit subsequent set of units ring network
2	21	first module	second beamsplitter
3	20	second module	first beamsplitter
4	22	optical window enclosure bottom plate	optical window enclosure bottom plate

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

22. **Claims 5-6 and 8-16** are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 19-22 of copending Application No. 09/435,657 in view of Tomich610. Claims 19-22 of 09/435,657 do not expressly disclose the subject matter of claims 5-6 and 8-16 of the instant application. However, Tomich610 does (see the treatment of claims 5-6 and 8-16 under Tomich610 above). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the invention of claims 19-22 of 09/435,657 by the subject matter of claims 5-6 and 8-16, as shown by Tomich610. One of ordinary skill in the art would have been motivated to do this since Tomich610 expressly teaches these modifications to the invention of claims 19-22 (also disclosed in Tomich610, as shown in the treatment of claims 1-4 under Tomich610 above) of 09/435,657.

This is a provisional obviousness-type double patenting rejection.

23. **Claim 7** is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 19-22 of copending Application No. 09/435,657 as applied to claim 1 above, and further in view of Tomich610 and Cisco.

Regarding claim 7, claims 19-22 of 09/435,657 do not expressly disclose:

The wide-signal bandwidth multi-access channel of claim 1, wherein the wide-signal bandwidth multi-access channel consists of two parallel fiber optic cables running counter directionally to one another.

Rather, claims 19-22 of 09/435,657 disclose simply a wide-signal bandwidth multi-access channel. However, Tomich610 does disclose a wide-signal bandwidth multi-access channel that comprises a fiber optic cable (fiber optic cable 200 in Fig. 1). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to implement the channel of claims 19-22 of 09/435,657 with a fiber optic cable, as shown by Tomich610. One of ordinary skill in the art would have been motivated to do this since Tomich610 expressly teaches this implementation to the invention of claims 19-22 (also disclosed in Tomich610, as shown in the treatment of claims 1-4 under Tomich610 above) of 09/435,657.

However, claims 19-22 of 09/435,657 in view of Tomich610 still only discloses a single fiber optic cable (Tomich610, fiber optic cable 200 in Fig. 1). However, such channels that consist of two parallel fiber optic cables running counter directionally to one another are extremely well known in the art. Cisco shows examples of such channels (figure under SONET/SDH Bandwidth Allocation and figure under Dynamic Packet Transport) as part of ring networks. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the channel of claims 19-22 of 09/435,657 in view of Tomich610 by adding a parallel fiber optic cable running counter directionally to fiber cable 200 in the ring network of claims 19-22 of 09/435,657. One of ordinary skill in the art would have

been motivated to do this since doing so enables a fault recovery mechanism in the event of a node failure or a fiber cut that causes the ring to wrap (Cisco, section SONET/SDH Ring Technology and section Cisco Dynamic Packet Transport), thus providing restored communication around the fault.

This is a provisional obviousness-type double patenting rejection.

24. **Claim 17** is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 19-22 of copending Application No. 09/435,657.

Regarding claim 17, claims 19-22 of 09/435,657 do not expressly disclose:

The wide-signal bandwidth multi-access channel of claim 1, wherein the photonic signals use a proprietary modulation.

However, Examiner takes Official Notice that the practice of employing proprietary modulation schemes is extremely well known in the art. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to arrange the photonic signals of claims 19-22 of 09/435,657 to use a proprietary modulation. One of ordinary skill in the art would have been motivated to do this for the common purpose of interfacing the channel of claims 19-22 of 09/435,657 with other equipment that also uses the same proprietary modulation. Another common motivation is to encourage customers to purchase the channel of claims 19-22 of 09/435,657 and all of the equipment that interfaces with the channel of claims 19-22 of 09/435,657 all from the same vendor, that is, the owner of the proprietary modulation scheme, thus increasing the revenues of the owner of the proprietary modulation scheme.

This is a provisional obviousness-type double patenting rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David S. Kim whose telephone number is 571-272-3033. The examiner can normally be reached on Mon.-Fri. 9 AM to 5 PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on 571-272-3022. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DSK

M. R. Sedighian

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PRIMARY EXAMINER